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ABSTRACT

Two major topic areas related to the affective half of prescriptions in mathematics are explored. The first area focuses on stationary or general information about motivation which provides an important backdrop as a prelude to formulating useful individual affective prescriptions. Several observations about stationary motivational variables (based on attribution theory) are noted. It is indicated that achievement motivation in general may not be reflected in a student's intent to achieve in mathematics (or even in various different mathematics experiences) and that teachers should appreciate the power of attributions (such as ability, effort, luck and other people) for success and failure. The second area focuses on the individualization of the affective prescription, examining: (1) anxiety and attitudes toward mathematics; (2) if a student's motivational problem is really a family product; and (3) whether special children are different from others (considering children deficient in primary group family experience, the value defective youngster, group conditions, and temperament and schooling). It is pointed out that an affective component can be added to the usual academic prescription and that responding to individual differences is not just to have tasks which are possible for students at any given point in time, but methods which are appropriate. (JN)

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Dr. John W. Wilson Memorial Address

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Diagnosis and Prescription: The Affective Half

By

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DIAGNOSIS AND PRESCRIPTION: THE AFFECTIVE HALF

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DEDICATION

John Wilson grew up and was educated in the public schools in Buffalo, New York. He married Nancy McClellan and they became the proud parents of Debi, Mark, John and Wendy. He served in the Fifth Army Division in Europe in 1955, before becoming a kindergarten, and later, a second grade teacher on the Onadauga Indian Reservation in New York State.

John's educational background includes a liberal arts degree at Bowling Green State University and a master's degree in epistimology at Harvard, as well as completing the Ph. D. in Education at Syracuse in 1964.

In the early 1960s he directed the country's first arithmetic clinic begun by Dr. Vincent Glennon at Syracuse for the diagnostic study and treatment of learning problems in mathematics. When Dr. Wilson moved from Syracuse in 1969, he continued to develop diagnostic courses and clinical programs for advanced degree students at the University of South Florida, Tampa, and the University of Maryland, College Park.

He is recognized as one of the original "founding fathers" of the Research Council for Diagnostic and Prescriptive Mathematics. He truly was a pioneer leader of the diagnostic mathematics movement during the past two decades. His ideas and ideals continue to live and grow through his students, his colleagues, and his writings.

At his death, John Wilson held the positions of Director of the Arithmetic Clinic, and Professor of Mathematics Education at the University of Maryland. This address is part of a series of lectures given annually at the international meeting of the RCDPM and is dedicated to the memory of John Warner Wilson.

Don Bernard

JOHN WARNER WILSON

1929 - 1979

"WE DO NOT LEARN BY DOING!
WE LEARN BY THINKING ABOUT WHAT WE ARE DOING!"

Diagnosis and prescription: The affective half

William C. Morse
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Introduction

It is interesting to interview youngsters with the question, "Why do/don't you do the work assigned to you in school?" The answers cover a broad spectrum and provide an idea of the various explanations of which pupils are aware and willing to share, depending upon how much they trust the interviewer. "I work because I'm supposed to." "To please my parents." "Cause I've got a nice teacher." "It is fun to learn new stuff. I like it." One finds much latent curiosity and joy in mastery. You may have read about the boy who wouldn't talk in class because this would just be saying what he knew already and he wanted to listen because that is the only way he could learn new things. Many have no parents or even teachers they love to please by doing school work: who cares? Others blame the teachers who "don't help you and stuff."

Many youngsters are very anxious: they work because they are afraid of flunking or of being dumb. Often they have no internal anxiety to achieve: they work only when you stand over them and provide a possible external source of anxiety. Learning may be instrumental, "To get to the next grade." Others are immune to such motivational ploys. "I don't do it because it's no fun. I like to play better and watch TV." "I don't feel like it." "It's too hard." Studies take too much time from higher priority activity for some pupils. "I don't do it 'cause I don't like it. Why should you do stuff you don't like?" Following your own ideas does not just suddenly emerge at adulthood: existentialism is always with us.

But even some young pupils employ a personal perspective about the future which includes learning their math to be an engineer or carpenter. Others see no use to such achievement. "What good is it?" They already know all the arithmetic they need to count empty beer bottle returns.

Adolescents tend to present similar reasons for their learning behavior but with more sophisticated arguments and defenses. We still find those who learn for personal reasons or to please others as well as the reverse. The adolescent who finds no internal value in the studies is a high risk student. If learning is only to please others, there will be a day when the youth issues an emancipation proclamation which is the coming of independence. From now on it's one's own goals whether these fit adult society or not. The early adolescent, middle school period is often the place where one sees this emergence of independence and frequently in crude and abrasive ways. Parents and teachers tend to react strongly with repressive measures, disowning the deviate or giving up. By these means we lose the attachment the youngster needs to have with adults and encourage a pathological attachment to the peer culture values. We need to learn to manage the delicate balance between the early adolescent's executive independence needs and the way we provide adult guidance. It is worth noting that, in the developmental study done by Jessor and Jessor (1977) the period of grades 7 to 10 is a time of drastic reduction in the perceived value of academics.

When one puts the same questions to special youngsters categorized as learning disabled, disturbed or mildly retarded, the responses are of the same order but more intense and more desperate. One group of LD youngsters asked me to tell their parents not to blame their school problems on not trying hard enough. They felt they were already overworked. But they were among the born losers no matter what. They said adults just didn't understand: they couldn't do all that school stuff. There was a great move toward devaluating what they could not do. "Who can use that junk anyway." Story problems in math "ain't fair." It's bad enough to do arithmetic without reading added information to make it a double failure. Adolescents also work within the framework of their time of life and use all the adolescent phenomenon to avoid work. They will catch up later. No hurry. "I can do it when I need it if I want to." (Cruickshank, 1980) Disturbed youngsters felt much the same way but they were more ready to blame their dilemma on poor teachers, being blamed when they were not a part of what happened and getting frustrated at "all that junk" you have to do all the time in school. Low self esteem is sometimes covered up but it is usually there someplace.

There is a proclivity on the part of teachers to blame youngsters for the rationalizations they use. We must remember the youngsters did not invent these responses; they learned them. They were taught how to respond to their failures, emotional upsets, dismays and the like. But when they give any answer but the one that they will try harder, adults often show resentment.

If one had a sample of typical adults and asked them why they learn new skills or acquire new information or do their work, would it be much different? Of course many adults have abandoned new achievement. Some continue to study to "get ahead." But if they can, most adults avoid learning situations where they might fail, and there are adults who have not acquired a great deal of new knowledge in a planned way for a period of years. Professionals are supposed to be internally motivated to learn new things but the medical profession requires credits to enforce post graduate education. In some local areas 80 percent of the teachers have reached the plateau of required education and rest there, warding off inservice and new experience unless forced or paid to attend. One trouble with most of us here at this meeting today is that we *are* professionally motivated. We had best recognize that we are a minority and not take on airs of holiness in interfaces with children.

When I ask an audience of teachers how many would do something else than teach if the salary and prerequisites were similar, an astonishing number say they would leave. Some are suffering job fatigue and some are not for teaching. But, like certain children, they work for certain "tokens." In this case the token is survival and it is called "cash." All we can ask is that we identify with the children we teach, many who live in another mental place even though they are in our classroom. This is the crucial problem developing resonance for those children who are often seen as aliens and atypical. In truth each child attends his or her own personal school even though we collect the children in one common place. They attend their own school as indeed we are each here at this moment attending our own conference. It may be we are attending the transactions suggested by the speaker or it may be we are thinking of something far more critical to our individual lives at his moment. Collecting a group in a physical place is far easier that collecting their attention in one place.

We will now move through two topics in our effort to understand the affective half of prescriptions. The first consists of stationary information which has general application. The second is the individualization of conditions which one finds in each and every "one of a kind" pupil.

Stationary Information

Stationary or general information about motivation provides a very important backdrop as a prelude to formulating useful individual affective prescriptions. Without a theoretical base our individual efforts will be ad hoc searches.

This is in the way of renewal. Times have changed rapidly since most of us have thought formally about the problems of motivation which are at the heart of teaching. There is a formal research in progress concerning teachers' perceptions of chnges in the nature of their work over the last ten years: the following observations are from only a small sample of my own interviews.

It becomes blatantly evident that teachers perceive teaching as an increasingly complex task. These comments are from successful teachers working in what is considered to be good, small town school districts. Pupils are seen as less interested in learning, harder to manage, more prone to acting out and being defiant. Many youngsters lack age appropriate social skills. While the most vexing children are resistive, there is a appreciable number of the opposite demeanor: they are dependent and need support at every juncture, crave teacher attention and are unable to work on their own. Where once a look, request or threat used to settle pupils down, nowadays even little incidents are prone to be seen as cases for the Supreme Court. Of course it would be an error to say these reactions are universal. Teachers still report the primary fact of individual differences within their classrooms. Most classes contain a broad range of students from the highly motivated to the impossible to motivate. Mainstreaming special pupils has added to the dilemma. Historically the majority of special pupils have always been in regular classrooms rather than special services, but such individuals used to be lost in the complex of the classroom. The difference today is that the atypical pupils are highly visible and diagnosed. There is accountability through an Individual Education Plan which is the responsibility of the teacher. Teachers also report that there are many pupils who, for various reasons, become significant classroom problems yet do not seem to fit the special education categories. Often there is little or no help available for these who are not deviant enough to fit the rubrics of special education. Adding it all up, it is small wonder that there are a legion of battle-fatigued classroom teachers. With the current cutback on resources for both general and special pupils, there is considerable resentment on the educational front line, and no one expects the condition to become better soon.

We turn now to some of the recent theory and research relating to achievement in general and specifically mathematics learning.

Motivation and attribution theory

Seminal work on motivation was done by Atkinson (1964). Individual differences were studied in the basic motivations: (1) the need to achieve; (2) the need to relate to others; and (3) the need to hold power. He and many others have since elaborated and modified these basic categories. In his most recent article Atkinson (1981) continues to probe motivation. Basically what he points out is that personality functions do not necessarily remain stable across situations. Applied to our field, this means that high achievement motivation in general may not be reflected in the pupil's intent to achieve in math-or even in various different math experiences. Atkinson finds that there is a residue of generality but it may be overcome by particular situations. While there are of course great differences in the way individual personalities pattern out, the overall power of a genotypic trait like achievement motivation is modest in predicting a given phenotypic behavior. While some pupils will have a constant motivation level across subjects, varia ion is more to be expected. We cannot trust that a "good student" will necessarily be a "good math student." The student will bring some inclinations with him but be responsive to given classroom conditions. We had best therefore reflect both on what the pupil brings to the classroom in salient affective components and what forces are likely to be generated by a given classroom's inductions. If we wish to change things, different strategies will be relevant depending on the source of malaise.

Weiner (1980) lists the causal attributions for achievement performance as ability, effort, luck and other people. He found there were effects which accompanied success and failure independent of these attributions - "regardless of why." Happiness accompanied success regardless. Failure produced upset and frustration. The emotions were stated as intense. Differential degrees of guilt accompanied internal attributed failure, pride and confidence of success. To the externally oriented pupil, success nets thankfulness and gratitude while failure produces anger and surprise. Weiner goes on to explain why attributions are so crucial. If one ascribes failure to lack of ability, little can be expected. If it is luck, one waits. If it is lack of effort, motivational changes can be anticipated. With the Learning Disabled youngster who has tried and tried hard, the expectation of change is limited. Lack of ability produces a feeling of incompetence.

Lack of effort induces guilt. Teachers tend to favor lack of effort attributions, to produce guilt, and hopefully to produce motivation for the next time which is, frankly, anything but an assured result. If we attribute poor achievement to lack of ability as Weiner points out, we often feel sympathetic and try to provide help and comfort. This may increase the pupil's feeling of incompetence, reduce expectations, and sometimes provide even too much help, taking over legitimate student responsibility. If we attribute poor achievement to a lack of effort, we will show displeasure and anger, withholding help and expecting the student's guilt to motivate effort. This puts the pupil in a position of anticipating punishments when he fails. These are powerful feelings and may not lead to the desired end of more effort.

For teachers, the issue is to appreciate the power of our attributions for success and failure. It is interesting that different tasks are given different causality. The four major casualities are: due to my effort, due to my ability, due to my interest, and due to the nature of the task. Success in formal academic achievement is largely related to effort rather than ability. In art, ability comes first, effort second and interest third. There are certain special tasks where task ease or difficulty is chosen as the reason for success or failure. As one would expect, pupils favor internal causes (effort, ability and interest) when they succeed and external causes (task difficulty) when they fail. Many times "luck" is the attribution - good or bad (Frieze 1980). It should be underlined that, especially in mathematics, recent research reveals sex differenes in attributions of success and failure.

Parsons (in press) depicts the movement toward attribution theory, expectancies, self-concept of ability and the value and difficulty of the task as the forces behind motivation. These attributions are seen as having cultural, personal and developmental derivation. Particular attention has been given to sex differences in math performance, which appear to be mediated individually by sets of these factors. Girls in general have lower perceptions of their ability and feel math will be more difficult for them and of less value than for the boys. She also found that parents had more influence on achievement related beliefs than teachers. Parsons, on the basis of her evidence, holds that the *Newsweek* and *Time* articles which quote Stanley and Benbows' analysis in *Science* suggesting a superior male gene factor for math achievement is flatly wrong. She has found that girls stop taking math because of erroneous views of their ability. Girls attribute equal grades and scores as "hard because I'm not good at it" while boys say "it's hard but I am good at it." She finds that

surprising that SES describes a set of conditions which foster school learning (Heyns, 1978). But this is only a gross generalization, for there are families with few financial resources and yet a hope through education. Also, the dislocation of family stability knows no class identification any more. Presumably we will need a new index to indicate family as a supportive system for encouraging learning. In fact, Finkelstein (1979) has depicted a dynamic historical approach to school-family mutual support.

Of course most rational problems will not evaporate because sources have been identified. But our usual response has been to blame the youngsters. They are somehow atypical, abnormal and bad when in fact they are merely reasonable expressions of the society. The more pressure we put on, the more intense the battle becomes. In truth, it is a values conflict. When one faces a pupil with an alienated value system, one is facing a very powerful force. People have been known to die for their beliefs. What we must do is discuss these value differences openly and candidly. In my own experience, if what we are teaching has some intrinsic value, it will be meaningful to most youngsters. Often we are the least effective advocates for our own subjects sinced it is obviously our "job". Real life working persons who represent the eventual destiny of the youngsters can be more effective advocates than teachers to discuss values of math with pupils. But, if what we are teaching is too remote from everyday utility, we will have to alter our content so that the link is apparent. And of course we will never win over all the pupils.

School input-output variables

We conclude these observations about stationary motivational variables with an examination of the sophisticated study of Bridge, Judd and Moock (1979) where there are math applications. What they have done is a reanalysis of all of the pertinent studies dealing with educational inputs, processes and products. Not all of the results listed here are similar for minority pupils.

1. As we have already noted, females are superior to males in reading achievement but lower in math achievement.
2. Attendance in kindergarten increases the positive math prognosis in elementary school.
3. The older the pupil relative to classmates the less well the pupil does on math achievement.
4. Math achievement benefits significantly from time spent on math in school. To increase math achievement scores one point requires a 28 percent increase on class time - which incidentally is 2½ the increase required for equal reading achievement.
5. Math achievement decreases as the number of children in the family is greater, increases with parent education, occupational status, and parental expectations.
6. The ability of the peer group may show a positive relationship to an individual student's achievement in math.
7. At the elementary level, there is a negative relationship between teacher educational attainment and student achievement in math. The rate of teacher turnover is inversely related to math achievement.
8. Tracking seems to have a negative effect on math achievement.

I cite these general findings because the input-output model is next on the horizon for studying education. But remember these are generalizations and weak determinants overall and not applicable to individual children. Individual pupils carry particular configurations and to that we turn next.

The Individualization of the Affective Prescription

The lives of children and adolescents today are in marked contrast with a generation ago which many of us still use as a reference point because it represents our experience. There is nothing which we have not heard about, but what we do not recognize is the meaning to the child of the growing at risks. Segal (1979) has summarized the research concerning the impact of one-parent families, impact of divorce, abuse, peer influence, poverty and modern media as well as schooling. We are so immunized against our cancerous society that one must be confronted with all of these things together to recognize how risky it is to grow up today.

In each child resides the particular pattern of these forces. In many instances the youngster displaces the grief, the frustration, the fear of the future on the school and becomes a psychological dropout (Lichter, 1962).

mothers are the source of these diffential beliefs. Further, she finds math teachers seldom counteract these negative parental notions, (Parsons, 81), nor do they suggest advanced math as useful for girls. Parsons has also found that the schools which "fire up" enthusiasm for math are those which relate it to their daily lives.

Anxiety and attitudes toward math

A few years ago Nowacek (1976) studied attitudes toward school subjects. Students report that the subject they liked best was because of the teachers who taught them; for the subjects disliked most, subject matter was given for the reason. Some students were consistent across English, science and math; others were fractured liking or disliking one or another. Also within any of the three fields, attitudes differed greatly in relation to specific courses. Overall, the percent of these high school students with positive attitudes toward math was 11 while 47 percent had negative attitudes. Math had the highest negative effect.

The presence of both latent and overt negative attitude toward math has moved some teachers to conduct a brief attitudinal survey at the start of teaching a course. The feelings are reported back anonymously and discussed to cleanse the affective air. Also, methods of dealing with anxiety about mathematical ability are suggested, since anxiety underlies much of the avoidance behavior. Since there are significant differences in pupil anxiety about mathematics, one might wish to use something like Rounds and Hendel's (1980) Mathematics Anxiety Rating Scale (MARS) in this connection.

While a little anxiety may stimulate learning, it is generally recognized that too much is disorganizing and of course especially so to disturbed and learning disabled pupils who are usually low on persistance to start with. Meece (1981) has studied the role anxiety plays in relationship to math. She has found that anxiety is largely a response to self concept of ability, regardless of value on math. The most anxious were those who placed low self concept and perceived themselves as having low ability. It is probable that, when they say they do not care, they are really upset and the devaluation is the defense of saying math is of no use.

What this leads us to is that the youngster in any math experience comes with a legacy. This legacy can be divided into a general part which has to do with school learning in general and a specific focus on learning mathematics. Mathematics is particularly prone to produce reactions: the subject carries with it an emotional baggage. The math experience is frequently one of high organization and specific and continuous feedback of performance. It lends itself to more precision than many school subjects. There is a right answer. This may suit the learning dilemma of some students very well but not be as appropriate for others.

Some difficulties may result from a mismatch of format between the learning style and need priority of a pupil and the design which is emphasized by the teacher. An interesting and complex study of the problems of match is found in Solomon and Kendall. (1979). While normal pupils can be expected to accommodate to various teaching styles to a considerable degree, giving up their personal inclinations to fit, this is a low probability with disturbed and learning disabled youngsters. They persist in ways which may be of low yield for their learning. Solomon found problem pupils described as follows: low in achievement, lacking in self confidence, little intrinsic motivation, feeling powerless and with little concern for the welfare of others. Now these youngsters are the very ones who need considerable emotional support in their classroom structures but what we do is to try to tutor them into cognitive competency. The study found that what they needed was warm and expressive classes with moderate control. Another interesting problem student type was the independent seeking pupil. This surgent, autonomy seeking student valued independence and self direction and rejected external authority. Obviously this style did not accommodate to certain teaching styles either. Some of these "stubborn" pupils are also defensively abrasive.

Is the Pupil's Motivational Problem Really a Family Product?

There is more and more evidence that many children who do not do well in school fail because the societal and home support is weak or nonexistent. A colleague has been investigating the supposed lack of the LD phenomenon in China. He studied learning in Taiwan where a different set of symbols is used in reading and writing. In short, he found they have pupils who have learning problems just as we have. But his work will focus on why we have so much "nonlearning" in the schools today. While some can be attributed to poor teaching, the impressive thing is that, in China, teachers are revered and learning is highly respected by the culture, by parents and of course by pupils. It is his belief that we are trying to teach many children who live in a motivational vaccuum. This observation is shared by many other researchers. It is not

Are special children different?

Sometimes there is a we/them dichotomy proposed about special education pupils. They are different. The fact is the differences are only in special segments of their lives and then in degree, not kind. Sooner or later most of us will have, to some degree, the special impairments. In fact, many of us do already - sight, hearing, memory, motility, and affective impairment. (Morse, 1979).

Special children and youth are first of all children with the same needs and life perplexities as other children, *only in certain areas more so.* It is high risk to be impaired in this society at any age. It is also high risk to be young. In considering learning impaired, emotionally distraught or mildly retarded we should acknowledge that they are not apart from others and that some of the same conditions are in most of us to a degree, though we are supposed to have compensating balances. The point is that the myths and defenses we put up about special children are prejudicial. They are human beings with the same emotional dilemmas we all know. At the same time their impairments make them risks and their needs require more sophisticated responses on our part. While in some cases particular problems follow in line with the given impairment, overall they have the same motivations as we have and regular children have but with fewer resources. Fortunately, the details of each special category as they relate to special education are detailed in the recent book of the National Council of Teachers of Mathematics, *Mathematical Education of Exceptional Children and Youth.* Each impairment is dealt with in detail. What we can say about teaching special children in general is to be alert for low self esteem, anxiety, overt and covert feelings of frustration and anger, less flexibility in following teacher plans and more self generated purposes (often alien to the classroom). Many feel they are born losers, have problems with life relevance of school learning, give up easily and are distracted by internal and external stimuli. There may be mercurial changes in mood. Their sense of inadequacy includes school but is more pervasive.

There are those who make a career of surface compliance to cover up deeper feelings that they will never learn. They are the "pretend tutees" you find when you work individually. They are pleasant, simulate eagerness but little they do sticks. They work when in your presence. Now the point is not to list characteristics per se but to set up cues for understanding. When you are able to teach special children you have really proven your teaching talent. It will not come easily. But, given their problems, their behavior is just as humanly normal, just as reasonable and just as lawful, if you will, as the more typical child.

One thing to expect in the career lines of underachievers, special pupils or no, is increasing retardation over the grades. When a pupil's learning ratio is .65 rather than 1.00, every year of accomplishment over the past is appreciable though the behind-the-average growth in amount. Remedial interventions usually improve the ratio, say to .85 on the average. Part of this is catchup, but note that it is still a slower rate than the average expectancy. When the intervention is dropped, the ratio falls back but not as far as the prior slope of gain. All of this is also confused in the individual case because the "s" curve of functions is imposed on a hypothetical straight-line average, growth of individuals follow their own "s" function apart from the mean. These are the reasons why anyone who designs remedial programs should not wait until four years to check gains: the sooner the better. The severe learning disabled whose own "s" curve flattens off at the third or fourth grade level gets further and further behind over the adolescent period. It is little wonder that special pupils often become so depressed in the junior and senior high school. As one said, "You are convinced now you are never going to make it. But they keep at you. They should bug off." But from a teacher's point of view and the competency-graduation requirements along with some phantasy IEP's, teachers are accountable to make the performance normal. It seems to be indecent in this country to admit there are fundamental individual differences in potential for certain achievements which are highly valued by society. Both kids and teachers are between the rock and the hard place with no place to go but at each other.

As we think of individual youngsters, it is important to recognize there are as many patterns or constellations of factors as there are pupils. There is rarely a single cause or simple issue which creates the problem. And we have seen how many conditions can become part of the matrix. Since there are many producing conditions it is unlikely we can expect simplistic solutions. What we are about to do is focus on some situations that are less apparent in the literature but nonetheless have been found by teachers as important issues in working out the affective aspect of prescription.

Children deficient in primary group family experience. Many of our pupils no longer come to school having learned what a family should teach them - who they are, socialization, and trust. They come to school needing to learn those basic humanizing experiences which are possible to teach only when the adult provides the essential nurturing and sets standards. In a school

classroom, a secondary group, they seek the essential adult relationship but the classroom is designed for other goals. So their relationship seeking regresses to attention getting and their needs are not met. Their motivation for getting what they need is high, but the assigned task of the class is something else.

While we cannot be the family support for pupils, there are several things we can do. By watching *how* we teach and give help, we can provide caring for many youngsters. Teachers already do much of this through providing warmth and mutually enjoyed successes for their pupils. The problem is to see beyond the often irritating symptomatic behavior and to realize the desperate needs of these youngsters. Therapeutic tutoring replaces mechanical assistance on skills only. We need to use volunteer aids (grandparents, etc.) to provide more human nurture. There will not be enough formal helpers to go around. Also, affective education programs will need to be increased (Morse, 1980).

In many instances the needs of these children require a partial special diet of high human input which cannot be provided in the mainstream. As the child gets older, it is also necessary to help him understand where he is hurting and what can be done to supply what has been missing and often still is. We remember Segal's data.

The value defective youngster. There are many pupils who just don't care to learn what we think is relevant for them to know. First, we challenge our curriculum for its vitality, and for some we may find things which must be changed.

But the problem is deeper. We have alienated children and youth who do not accept societal values. They want immediate gratification, no hard tasks to do and want to have fun. As one author puts it, when they become adolescents it is sex, automobiles and money - not work. These value alienated young persons should be separated from look alike but willing workers, who are in fact anxious to work. They want to get out of school and join the real world of jobs and are candidates for cooperative on-the-job education.

What can we do for those who just don't see any value in what we must teach? The first thing is not to get mad at them because of their value system. It doesn't help to be angry or moralistic; this just increases the distance between us. Then we can admit there are others who feel as they do, and yet there are these things which must be learned. We break up the tasks into parts with shorter lessons. We provide gratification at the end of each. If we could pay cash, some would work. If we could give prizes and goodies, some would work. But about all we can do is to apply the Premack principle - if they do what they are supposed to that they do not like, we give them something they do like, free time for reasonable, predefined activities. Getting kicked out is their own solution, since even the streets or home - or even the office - is preferred to our classroom.

The early adolescent loss. The place where we lose most pupils is the middle school or junior high school. What adults often do both at home and school is to break the needed attachment of this age to adults. This is done in the following sequence. This age needs to feel executive independence - that they are their own person. But so often they do this crudely and abrasively. Few adults know how to walk the tightrope between demands and tolerance for this age. Early adolescents generate anger and anxiety in us. Instead of discussing matters and not getting upset, we react. We become more officious and demanding, figure out ways to punish or abandon them; "If that is the way you are going to behave there is nothing I can do."

For this raising of the young from childhood through adolescence, a new type of respect is needed for they are not above pushing us to the limit. Here we need to do two things: one is understand what is going on and the second is to develop skill in effective talk around problem situations. One school related technique for this type of problem solving is the skill called Life Space Interviewing. (Long, 1980).

Group conditions. The classroom group has a power input for most pupils. This is especially true of kids who lose their adult attachment but all youngsters are caught between peer and adult values and pressures.

We need then to study our leadership style and the peer culture (Sarason, 1971). Kids play games with teachers, like the 'you're not fair game', and the 'if you liked us you wouldn't make us work hard game' as Newman (1974) describes. There are also the group code and norms. It may be that to do school work costs a person peer status. We need to ascertain the group values to see if that is the source of the problem. Groups can set off contagion chains, scapegoat special kids, be fractionated and the like which provide immunity from the teacher's interventions. It is amazing how little training in group process is provided for the teachers who are after all group workers. At least, when there is a general motivational problem, one should explore this matter.

Temperament and schooling. Among the individual differences which make for hazzards in growing up are temperamental differences. This has been studied at length by Thomas and Chess (1977). They found three patterns. The majority of children are easy to raise. Then there are difficult children by temperament, some 10 percent. There are also slow to warm up children, 15 percent. The easy to raise are those who are cheerful, adapt

easily, have regular patterns and enjoy school. The difficult children are at the opposite end, and their condition is acerbated by the typical home and school response which leads to frustration and violent reactions. The slow to warm up stand on the sidelines and withdraw, adapting very slowly. These too do not fit well in the school regime. They take more time and consideration on the part of teachers. The two aberrant patterns are naturally prone to behavior disorders. The increase in risk can only be mitigated by very astute adult handling.

The admonition to parents and teachers is to respect biology. We try to mesh our expectations and methods with the natures of pupils. They can adapt, but the process has to be done with consideration, and clashes of teacher temperament and pupil temperament are counterproductive.

Conclusions

Affective prescriptions are easy to write in the abstract and hard, very hard, to accomplish in reality. There are so many youngsters where we know there is low self concept and we want to help. Do not underestimate the impact of schooling and teachers: as Segal says, the child's emerging self concept can be influenced greatly by teachers - even to awesome degrees! Most youngsters want to do what we ask and join the human procession.

To quote the *Mathematics Education,* 1970:

"The teachers will find it difficult to motivate all reluctant learners...but there are many things which the teacher can do." (p.278)

These include respect for th subject matter and the pupils, as well as going out of one's way to find out more about pupils. However,

"The teacher who is able to motivate all of his pupils for any major portion of the school year is a most unusual teacher."

Responding to individual differences is not just to have tasks which are possible for the pupil at any given point in time, but methods which are appropriate. Styles of the youngster's life and learning are important.

So much of the expectation hinges on being able to talk more effectively with individuals and groups around problems and affective matters. We are not trying to become therapists: we are concerned and empathic adults. The procedure which is suited to our work is described as Life Space Interviewing which is designed to explore and resolve problems on a realistic basis.

We are going to have to change some strategies and techniques to reach more youngsters in the midst of the classroom action settings. The basic thesis here is that we will have to reach deeper into the lives of the pupils we teach. Once we understand them, we will find appropriate approaches. Teachers are neither obtuse or unfeeling once they know the child.

The argument is not to forget our obligations for cognitive growth. The fact is we are already spending a great deal of time and effort dealing with affective flack in the system - some teachers even devoting over half of their time to such matters. Thus, the argument is, how can we be more effective in dealing with the affective component of our relationships? Can we change our modus operandi? Are there ways we can reach deeper into the lives of our children? My experience with classroom teachers has given me great respect for their abilities in this regard. Most of the profession is already going beyond the call of duty for many pupils. Can we increase our empathic potential for the lives of our charges? Are there ways we can enhance the sharing of lives? If we can, we will be moving toward the style of teaching which is tuned to the lives of those we see every day. We can add to the usual academic prescription an affective component. We can respond more completely to the whole of the pupils we see.

This is not to say each of us can be all things to every pupil. It is to say, someone of us may well be a significant adult to a given youngster.

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